

# **ZONING ISSUES AND WIND ENERGY IN VIRGINIA**

**Presentation to the  
Virginia Association of Zoning Officials**

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September 23, 2004**

# OUTLINE

- Why small wind?
- Barriers to small wind
- VA zoning ordinances: 3 categories
- Major zoning issues
- Examples of key issues
- Small wind energy systems and zoning review
- Utility-scale wind energy and zoning

# **WHY SMALL WIND IN VA?**

- Strong wind resources in certain regions;
- Interest in more energy self-reliance;
- Serious regional air quality problems;
- Potential economic development benefits; and
- Increased price and high volatility of conventional energy sources.

# **BARRIERS TO SMALL WIND**

- High capital costs – economics are marginal, at best;
- Need for technology improvements – particularly low wind speeds;
- Regulatory obstacles:
  - Lack of grid interconnection standards; and
  - Zoning obstacles.

# **ACTIVITIES IN SUPPORT OF SMALL WIND IN VA**

- U.S. DOE and VA DMME support for:
  - Anemometer loan program to measure wind speeds;
  - Analysis of economic and regulatory barriers; and
  - Pilot grant program
- Virginia Interfaith Power & Light

# **VA ZONING ORDINANCES: THREE CATEGORIES**

- Largest category - zoning laws that are silent about wind energy;
- Counties with no zoning ordinances;
- Zoning laws encouraging wind systems (e.g., Cape Charles).

# MAJOR ZONING ISSUES

<u>Land Use Requirements</u> <ul style="list-style-type: none"><li>• Permitted use?</li><li>• Conditional use?</li><li>• Agricultural use?</li></ul>	<u>Permit Process</u> <ul style="list-style-type: none"><li>• Cost</li><li>• Time</li></ul>
<u>Practical Requirements</u> <ul style="list-style-type: none"><li>• Height</li><li>• Setback</li><li>• Visual issues</li></ul>	<u>Technical Requirements</u> <ul style="list-style-type: none"><li>• Abandonment</li></ul>

# Utility Poles





# Transmission Lines



# Cell Phone Towers

# How Do Wind Turbines Compare?



Charlotte, Vermont

# EXAMPLES OF KEY ISSUES

- Overall
  - Balance between zoning needs and costs of regulatory process imposed on landowners
  - Costly administrative process may preclude small wind
- Specific Examples
  - Windmill versus small wind energy system
  - Permitted versus conditional use
  - Agricultural use
  - Consistency with State net metering rules – e.g. interconnection notification
  - Height limitations

# UTILITY-SCALE WIND

- **Recommended NWCC Guidelines for Success Wind Permitting Process**
  - Significant Public Involvement
  - Issue-Oriented Process
  - Clear Decision Criteria
  - Coordinated Permitting Process
  - Reasonable Time Frames
  - Advance Planning
  - Timely Administrative & Judicial Review
  - Active Compliance & Monitoring

# **UTILITY-SCALE WIND**

- **Northampton County, VA – Cape Charles Township**
  - Conditional use permit to Joint Industrial Authority to build Cape Charles Wind Farm
- **VWEC Geographic Information System Mapping of Sensitive Environmental Resources**

# RESOURCES

- National Wind Energy Coordinating Committee – [www.nationalwind.org](http://www.nationalwind.org) – resources include “Permitting of Wind Facilities: A Handbook”
- Virginia Wind Energy Collaborative – <http://web.jmu.edu/vwec/>
- U.S. DOE’s Wind Powering America Program - <http://www.windpoweringamerica.gov>
- American Wind Energy Association – <http://www.awea.org>